

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1. - 48. (Canceled)

49. (Currently Amended) A method for etching a substrate using a device having an inductively coupled plasma source configured to generate a high-frequency electromagnetic alternating field and a reactor configured to produce an inductively coupled plasma from reactive particles by the action of the high-frequency electromagnetic alternating field upon a reactive gas, comprising the step of:

producing a magnetic field, during the etching, a direction of which is at least one of approximately and predominantly parallel to a direction defined by a connecting line of the substrate and the inductively coupled plasma;

wherein the magnetic field is at least one of static, time-wise varying, periodically varying and pulsed and extends into a region of the substrate and the inductively coupled plasma, and wherein a variably adjustable high-frequency power is produced, is coupled as plasma power into the inductively coupled plasma, and is at least one of periodically varied and pulsed.

50. (Previously Presented) The method according to claim 49, wherein the substrate includes a silicon element.

51. (Canceled)

52. (Previously Presented) The method according to claim 49, wherein the magnetic field is produced in the producing step using an amplitude of a field strength between 10 mTesla and 100 mTesla on an inside of the reactor.

53. (Previously Presented) The method according to claim 49, wherein the inductively coupled plasma is produced with a high-frequency electromagnetic alternating field having a frequency that is one of constant and varying within a frequency range about a steady-state frequency.

54. (Previously Presented) The method according to claim 53, wherein the steady-state frequency is 13.56 MHz.

55. (Previously Presented) The method according to claim 49, wherein the etching is performed in alternating etching and passivating steps.

56. (Previously Presented) The method according to claim 49, wherein the etching is performed at a process pressure of 5 μ bar to 100 μ bar and a coupled-in average plasma power of 300 watt to 5000 watt.

57. (Previously Presented) The method according to claim 49, wherein a pulsed magnetic field is produced, via a current supply unit, an amplitude of field strength of which, on an inside of the reactor, is between 10 mTesla and 100 mTesla.

58. (Previously Presented) The method according to claim 57, wherein the magnetic field is pulsed at a frequency of 10 Hz to 20 kHz, and a pulse/pause ratio of 1:1 to 1:100 is set.

59. (Canceled)

60. (Currently Amended) The method according to claim [[59]] 49, further comprising the step of operating an inductively coupled plasma coil generator having a frequency of 10 Hz to 1 MHz in a pulsed fashion to produce the plasma power, an average plasma power of 300 watt to 5000 watt coupled into the inductively coupled plasma.

61. (Previously Presented) The method according to claim 60, wherein the inductively coupled plasma coil generator is operated using a pulse/pause ratio of 1:1 to 1:100.

62. (Previously Presented) The method according to claim 49, wherein the pulsing of the coupled-in plasma power is accompanied by a change in frequency of the coupled-in high-frequency power.

63. (Previously Presented) The method according to claim 62, further comprising the step of controlling the frequency change to maximize the plasma power coupled into the inductively coupled plasma during pulsing.

64. (Previously Presented) The method according to claim 62, wherein the inductively coupled plasma coil generator is operated in the form of an automatically acting feedback circuit, and a frequency of the high-frequency power produced, which forms the coupled-in high-frequency electromagnetic alternating field, is varied about the steady-state frequency.

65. (Previously Presented) The method according to claim 49, wherein the pulsing of the magnetic field is one of correlated in time and synchronized with the pulsing of at least one of the coupled-in plasma power and the high-frequency power coupled into the substrate via the substrate voltage generator.

66. (Previously Presented) The method according to claim 65, wherein the synchronization is performed so that the magnetic field is first applied before a high-frequency power pulse of the inductively coupled plasma coil generator for the coupling of the plasma power into the inductively coupled plasma, and the magnetic field is only switched off again after the high-frequency power pulse has faded out.

67. (Previously Presented) The method according to claim 65, wherein a pulse/pause ratio of the magnetic field pulses is greater than a pulse/pause ratio of the high-frequency power pulses, and the magnetic field is held at least approximately constant during the high-frequency power pulses.